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CURRENT STATUS OF ALL CLAIMS

Claims 1 to 45. Cancelled.

46. (Currently amended) The method of claim **[[3]]** **54**, wherein said G-protein coupled signal is increased intracellular calcium ion concentration.

47. (Currently amended) The method of claim **[[3]]** **54**, wherein said receptor is contacted with 2 or more different candidate compounds ~~said one or more candidate compounds comprises 100 or more different candidate compounds.~~

48. (Currently amended) The method of claim **[[3]]** **54**, wherein said candidate compound contacts said ADP-glucose receptor polypeptide in the presence of ADP-glucose.

49. (Currently amended) The method of claim **[[9]]** **57**, wherein said receptor is contacted with 2 or more different candidate compounds ~~said one or more candidate compounds comprises 100 or more different candidate compounds.~~

50. (Currently amended) The method of claim **[[9]]** **57**, wherein said candidate compound contacts said ADP-glucose receptor polypeptide in the presence of ADP-glucose.

51. (Currently amended) The method of claim **[[14]]** **60**, wherein said G-protein coupled signal is increased intracellular calcium ion concentration.

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52. (Currently amended) The method of claim [[14]]
60, wherein said receptor is contacted with 2 or more different
candidate compounds ~~said one or more candidate compounds~~
~~comprises 100 or more different candidate compounds.~~

53. (Currently amended) The method of claim [[19]]
63, wherein said receptor is contacted with 2 or more different
candidate compounds ~~said or more candidate compounds comprises~~
~~100 or more different candidate compounds.~~

54. (New) A method of identifying an ADP-glucose
receptor agonist, comprising:

(a) contacting an ADP-glucose receptor
polypeptide with at least one candidate compound under
conditions that permit said receptor to produce a G-protein
coupled signal in response to ADP-glucose, wherein said
ADP-glucose receptor polypeptide has the amino acid sequence
designated SEQ ID NO:2; and

(b) determining the ability of said candidate
compound to increase production of said G-protein coupled
signal, wherein a candidate compound that increases production
of said signal is thereby identified as an ADP-glucose receptor
agonist.

55. (New) The method of claim 54, wherein said
receptor is contacted with a library of candidate compounds.

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56. (New) The method of claim 54, wherein said receptor is contacted with 100 or more different compounds separately.

57. (New) A method of identifying an ADP-glucose receptor ligand, comprising:

(a) contacting an ADP-glucose receptor polypeptide with at least one candidate compound under conditions that permit said receptor to selectively bind ADP-glucose, wherein said ADP-glucose receptor polypeptide has the amino acid sequence designated SEQ ID NO:2; and

(b) determining the ability of said candidate compound to bind said ADP glucose receptor, wherein a candidate compound that selectively binds said ADP-glucose receptor is thereby identified as an ADP-glucose receptor ligand.

58. (New) The method of claim 57, wherein said receptor is contacted with a library of candidate compounds.

59. (New) The method of claim 57, wherein said receptor is contacted with 100 or more different compounds separately.

60. (New) A method of identifying an ADP-glucose receptor agonist or antagonist, comprising:

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(a) contacting an ADP-glucose receptor polypeptide with at least one candidate compound in the presence of ADP-glucose under conditions wherein said receptor produces a G-protein coupled signal in response to ADP-glucose, wherein said ADP-glucose receptor polypeptide has the amino acid sequence designated SEQ ID NO:2;

(b) determining the ability of said candidate compound to alter production of said G-protein coupled signal, wherein a candidate compound that alters production of said signal is identified as an ADP-glucose receptor agonist or antagonist.

61. (New) The method of claim 60, wherein said receptor is contacted with a library of candidate compounds.

62. (New) The method of claim 60, wherein said receptor is contacted with 100 or more different compounds separately.

63. (New) A method of identifying an ADP-glucose receptor ligand, comprising:

(a) contacting an ADP-glucose receptor polypeptide with at least one candidate compound in the presence of ADP-glucose under conditions that permit said receptor to selectively bind ADP-glucose, wherein said ADP-glucose receptor polypeptide has the amino acid sequence designated SEQ ID NO:2; and

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(b) determining the ability of said candidate compound to bind said ADP-glucose receptor, wherein a candidate compound that selectively binds said ADP-glucose receptor is thereby identified as an ADP-glucose receptor ligand.

64. (New) The method of claim 63, wherein said receptor is contacted with a library of candidate compounds.

65. (New) The method of claim 63, wherein said receptor is contacted with 100 or more different compounds separately.